Subject Index 1952-1953

ACHIEVEMENTS IN ENGINEERING EDUCATION. Thorndike Saville 4, 222
ADEQUACY OF COLLEGE MATHEMATICS. K. L. Noble 2, 121
A.E.C. LOOKS AT THE UNIVERSITIES. T. K. Glennan 1, 18
AERONAUTICAL ENGINEERS, '52 SUPPLY AND DEMAND. K. D. Wood 2, 99
AIR RESEARCH AND DEVELOPMENT PROGRAM. O. G. Haywood 7, 373
ARE WE READY TO CONSIDER A MAJOR CHANGE? W. S. Evans 8, 476

BASES OF ENGINEERING PROBLEM-SOLVING SKILLS. J. F. Calvert, H. P. Shelley and R. S. Hartenberg ...9, 509
BRITAIN'S ECONOMIC RISE AND DECLINE. G. Baekeland 2, 71

CAN CURRICULA IN INDUSTRIAL ENGINEERING BE UNIFIED? W. Platt ..2, 115
CAN ENGINEERING GRADUATES MAN A COMPANY? E. G. Bailey 5, 322
COMMUNICATIONS—RESPONSIBILITY OF MANAGEMENT. A. W. Rathe 9, 524
CO-OP PREPARES FOR ENGINEERING. C. F. Arnold 7, 390
CRITICAL EVALUATION OF COUNSELING. L. B. Bradshaw 10, 567
CURRICULUM AND COCURRICULUM. C. M. Duke 10, 558
CURVES OF DISTORTION. A. M. Hill ...9, 542

DERIVATION OF FORMULA. W. E. Howland 7, 430
DEVELOPING A COMBUSTION LABORATORY. J. H. Potter 2, 107
DISCUSSION. J. S. Campbell 8, 487
DISTINGUISHED PROFESSOR AT THE UNIVERSITY OF KENTUCKY. M. M. White 10, 573

EDUCATING ENGINEERS FOR 2000 A.D. C. C. Furnas 1, 23
EDUCATION FOR EDUCATORS. A. B. Cambel 8, 457
ELECTRICAL ENGINEERING CURRICULUM—MID-CENTURY TRENDS. R. G. Kloeffler 7, 420

PROFESSIONAL EDUCATION IN 4 YEARS. E. R. Schatz 7, 423
CURRICULUM SIZE 5. E. E. Dreese 7, 425
EMOTIONAL RESPONSE TO TEACHING TECHNIQUES. N. A. Christensen 10, 555
ENGINEER AND THE SCIENTIST, THE. W. F. G. Swann 4, 241
ENGINEER AS AN INDIVIDUAL IN INDUSTRY. H. N. Muller, Jr. 10, 562
ENGINEER BECOMES A PROFESSIONAL MANAGER. H. Rubey 5, 338
ENGINEER—SCIENTIST OF TODAY, THE. C. C. Furnas 4, 264
ENGINEERING ENROLLMENTS AND DEGREES, 1952. R. C. Story and H. H. Armsby 5, 1
ENGINEERING HISTORY—A PEDAGOGIST'S PROBLEM. C. L. Sonnenschein ...9, 504
ENGINEERING PROBLEMS IN ATOMIC ENERGY. W. E. Kelley 2, 95
ENGINEERS. H. Hoover 3, 133
ENGLISH AND HISTORY FOR THE ENGINEER. H. D. Piper 8, 460
EXPERIMENT IN CONFERENCE TEACHING. H. L. Manning 8, 448

FINANCING ENGINEERING EDUCATION. J. D. Millett 5, 289
FIVE-YEAR MINERAL ENGINEERING PROGRAMS. W. B. Plank 2, 103

GOAL FOR AMERICAN ENGINEERING EDUCATION. S. C. Hollister 1, 6
GOVERNMENT-SUPPORTED RESEARCH. A. T. Waterman 3, 153
GRADUATE MANUAL, REVISED 9, 545

HISTORY OF ENGINEERING EDUCATION. F. T. Mavis 4, 214

IN RECOGNITION AND A FORWARD LOOK. W. R. Woolrich 1, 3
INDUSTRY'S STAKE IN A.S.E.E. J. C. McKeon 8, 465
INSTRUCTIONAL STAFF EXTENSION DEVELOPMENT. M. D. Adams 8, 479
INTEGRATING ACTIVITIES OF AN AGRICULTURAL ENGINEERING DEPARTMENT. G. A. Marston 10, 570

INTEGRATION OF CHEMICAL ENGINEERING FUNDAMENTALS. J. M. Smith 9, 537
ISN'T THIS THE CRYING NEED? W. W. Rogers 7, 387

LAMME AWARD RECIPIENT 1, 47
LET'S CLEAN HOUSE. J. R. Snell 9, 497
LET'S FACE THE MUSIC. J. Gerardi ..7, 431
LOOKING AHEAD IN ENGINEERING EDUCATION. L. M. K. Boelter 4, 249
LOOKING AHEAD IN ENGINEERING EDUCATION. S. C. Hollister 4, 258

MANPOWER UTILIZATION AND NATIONAL SECURITY. A. S. Adams 5, 325
MANPOWER UTILIZATION AND NATIONAL SECURITY. C. H. Brown 5, 328
MATH FOUNDATION FOR INDUSTRIAL ENGINEERING. H. P. Emerson 8, 472
MATHEMATICS IN INDUSTRIAL ENGINEERING. W. G. Ireson 9, 528
MILITARY RESEARCH IN THE UNIVERSITIES. J. R. Killian 1, 13
MINIMUM MATHEMATICAL REQUIREMENTS. G. Ernst, B. R. Teare, R. B. Saylor, and P. D. Collier 2, 136
MINUTES OF EXECUTIVE BOARD MEETING 1, 53
MINUTES OF EXECUTIVE BOARD MEETING 3, 194
MINUTES OF EXECUTIVE BOARD MEETING 5, 342
MINUTES OF EXECUTIVE BOARD MEETING 10, 585
MINUTES OF GENERAL COUNCIL MEETING 1, 59
MINUTES OF GENERAL COUNCIL MEETING 1, 197
MODERN ENGINEER SHOULD BE EDUCATED AS A SCIENTIST: IN COLLEGE. G. S. Brown 4, 274
MODERN ENGINEER SHOULD BE EDUCATED AS A SCIENTIST: IN INDUSTRY. H. K. Ihrig 4, 269

NATION'S FLORIDA, THE. H. Colee 7, 364
NEW AND SPECIALIZED ARMY LABORATORIES. K. D. Nichols 7, 378

OPEN-BOOK EXAMINATIONS. R. H. Upson 7, 429
OPTIONAL PROBLEM. W. K. Viertel ..10, 581
OPTIONS AND ORNAMENTALITIES. A. G. Conrad 3, 177
ORIENTATION AND DEVELOPMENT OF JUNIOR ENGINEERS. J. F. Gordon 5, 316
OUTLINE OF PROCESSES OF REASONING. H. J. Masson 7, 410

PLAN FOR TRAINING WOMEN IN ENGINEERING. F. C. Morris 3,174
PROBLEM-SOLVING SKILL IN DRAWING. R. A. Kliphardt 9, 515
PROCEDURE FOR TEACHING FUNDAMENTALS. A. F. W. Ross 2, 79
PROFESSIONAL ENGINEER—ASCENDING TO NEW HEIGHTS OR LEVELING OFF TO MEDIOCRITY? W. R. Woolrich .8, 439
PURPOSE OF A COLLEGE EDUCATION. R. S. Rowe 8, 483

RELIABILITY VS. VALIDITY. I. Wladaver 9, 540
REPORT OF COMMITTEE ON ATOMIC ENERGY EDUCATION 1, 149
REPORT OF COMMITTEE ON IMPROVEMENT OF TEACHING 1, 32
REPORT OF COMMITTEE ON SALARIES. S. E. Section 3, 201
REPORT OF SPECIAL SURVEY COMMITTEE 3, 173
REPORTS OF VICE PRESIDENTS 3, 179
RIGHT TRIANGLES WITH INTEGRAL SIDES. F. C. Bragg 2, 124
ROLE OF PROFESSIONAL LICENSES. E. J. Nunan 10, 575
ROLE OF SPONSORED RESEARCH. R. A. Morgen 3, 145

SECONDARY SCHOOL AS SOURCE OF CANDIDATES. H. A. Jaeger 3, 159
SECRETARY'S REPORT. A. B. Bronwell .1, 52
SHOULD ENGINEERING SCHOOLS TEACH ENGINEERING? T. K. Sherwood ..7, 383
SIMPLIFIED TECHNIQUE FOR ITEM ANALYSIS. R. O. Swalm 7, 394
SINGLE TUBE SQUARE WAVE GENERATOR. O. W. Muckenhirn 9, 542
STATUS OF ENGINEERING ECONOMY. W. D. McIlvaine 2, 85
STRONGER ENGINEERING GRADUATES. G. E. Doan 9, 534
SUBJECT ADMISSION REQUIREMENTS. M. I. Mantell 7, 404

TEACHING AIDS FOR THERMODYNAMICS. W. J. King 3, 167
TEACHING WITH COLOR. W. C. Krathwohl 3, 155
TECHNICAL INSTITUTE: ITS RELATION TO ENGINEERING EDUCATION AND TRADE TRAINING. C. W. Beese 4, 236
THOUGHTS ON CONTEMPORARY PROBLEMS. J. S. Dickey 7, 371

Training Engineers for Industry. R. C. Sprague 8, 451
Training in Research. F. C. Lindvall 10, 578

Undergraduate Thesis in Chemical Engineering. A. S. Michaels ...2, 90
Unit Operations for Mechanical Engineers. C. A. Besio and H. A. Blum 8, 469
University of Florida 8, 445
Use of Films as "Outside Assignments." H. Wilke 3, 171
Use of Printed Materials in Engineering and Science. M. J. Voigt 9, 519

Westinghouse Award Recipient ...1, 50
What Are Contemporary Demands on Engineering Curricula?:
Electrical Engineering. W. L. Everitt 5, 294
Civil Engineering. H. E. Wessman 5, 298
Mechanical Engineering. N. P. Bailey 5, 303
Chemical Engineering. G. G. Brown 5, 307
Mining and Metallurgical Engineering. C. L. Wilson 5, 312
Where is the Challenge? J. F. Lee 7, 400

Youth and Engineering. D. D. Eisenhower 3, 131

Author Index

ADAMS, A. S. Manpower Utilization and National Security 5, 325
ADAMS, M. D. Instructional Staff Extension Development 8, 479
ARNOLD, C. F. The Co-op Prepares for Engineering 7, 390

BAEKELAND, G. Britain's Economic Rise and Decline 2, 71
BAILEY, E. G. Can Engineering Graduates Man a Company? 5, 322
BAILEY, N. P. What are Contemporary Demands on Engineering Curricula? —Mechanical Engineering 5, 303
BEESE, C. W. The Technical Institute: Its Relation to Engineering Education and Trade Training 4, 236
BESIO, C. A., AND BLUM, H. A. Unit Operations for Mechanical Engineers 8, 469
BLUM, H. A., AND BESIO, C. A. Unit Operations for Mechanical Engineers 8, 469
BOELTER, L. M. K. Looking Ahead in Engineering Education 4, 249
BRADSHAW, L. B. Critical Evaluation of Counseling 10, 567
BRAGG, F. C. Right Triangles with Integral Sides 2, 124
BRONWELL, A. B. Secretary's Report .1, 52
BROWN, C. H. Manpower Utilization and National Security 5, 328
BROWN, G. G. What are Contemporary Demands on Engineering Curricula? —Chemical Engineering 5, 307
BROWN, G. S. The Modern Engineer Should be Educated as a Scientist: In College 4, 274

CALVERT, J. F., SHELLEY, H. P., AND HARTENBERG, R. S. Bases of Engineering Problem-Solving Skills ..9, 509
CAMBEL, A. B. Education for Educators 8, 457
CAMPBELL, J. S. Discussion on "A Philosophy of Graphics" 8, 487
CHRISTENSEN, N. A. Emotional Response to Teaching Techniques 10, 555
COLEE, H. The Nation's Florida 7, 364
COLLIER, D. D., ERNST, G., TEARE, B. R., AND SAYLOR, R. B. Minimum Mathematical Requirements 3, 136
CONRAD, A. G. Options and Ornamentalities 3, 177

DICKEY, J. S. Thoughts on Contemporary Problems 7, 371
DOAN, G. E. Stronger Engineering Graduates 9, 534
DREESE, E. E. The Electrical Engineering Curriculum—Curriculum Size 5 .....7, 425
DUKE, C. M. Curriculum and Cocurriculum 10, 558

EISENHOWER, D. D. Youth and Engineering 3, 131
EMERSON, H. P. Math Foundation for Industrial Engineering 8, 472
ERNST, G., TEARE, B. R., SAYLOR, R. B., AND COLLIER, P. D. Minimum Mathematical Requirements 3, 136
EVANS, W. S. Are We Ready to Consider a Major Change? 8, 476
EVERITT, W. L. What are Contemporary Demands on Engineering Curricula? —Electrical Engineering 5, 294

FURNAS, C. C. Educating Engineers for 2000 A.D. 1, 23
FURNAS, C. C. The Engineer—Scientist of Today 4, 264

GERARDI, J. Let's Face the Music 7, 431
GLENNAN, T. K. The A.E.C. Looks at the Future 1, 18
GORDON, J. F. Orientation and Development of Junior Engineers 5, 316

HARTENBERG, R. S., CALVERT, J. F., AND SHELLEY, H. P. Bases of Engineering Problem-Solving Skills 9, 509
HAYWOOD, O. G. Air Research and Development Program 7, 373
HILL, A. M. Curves of Distortion 9, 542
HOLLISTER, S. C. Goal for American Education 1, 6

HOLLISTER, S. C. Looking Ahead in Engineering Education 4, 258
HOOVER, H. Engineers 3, 133

IHRIG, H. K. The Modern Engineer Should be Educated as a Scientist: In Industry 4, 269
IRESON, W. G. Mathematics in Industrial Engineering 9, 528

JAEGER, H. A. Secondary School as Source of Candidates 3, 159

KELLEY, W. E. Engineering Problems in Atomic Energy 2, 95
KILLIAN, J. R. Military Research in the Universities 1, 13
KING, W. J. Teaching Aids for Thermodynamics 3, 167
KLIPHARDT, R. A. Problem-Solving Skill in Drawing 9, 515
KLOEFFLER, R. G. The Electrical Engineering Curriculum—Mid-Century Trends 7, 420
KRATHWOHL, W. C. Teaching with Color 3, 155

LEE, J. F. Where is the Challenge? ...7, 400
LINDVALL, F. C. Training in Research 10, 578

MANNING, H. L. An Experiment in Conference Teaching 8, 448
MANTELL, M. I. Subject Admission Requirements 7, 404
MARSTON, G. A. Integrating Activities of an Agricultural Engineering Department 10, 570
MASSON, H. J. Outline of Processes of Reasoning 7, 410
MAVIS, F. T. History of Engineering Education 4, 214
MCILVAINE, W. D. Status of Engineering Economy 2, 85
MCKEON, J. C. Industry's Stake in A.S.E.E. 8, 465
MICHAELS, A. S. Undergraduate Thesis in Chemical Engineering 2, 90
MILLETT, J. D. Financing Engineering Education 5, 289
MORGEN, R. A. Role of Sponsored Research 3, 145
MORRIS, F. C. Plan for Training Women in Engineering 3, 174
MUCKENHIRN, O. W. A Single Tube Square Wave Generator 9, 542
MULLER, H. N., JR. Engineer as an Individual in Industry 10, 562

NICHOLS, K. D. New and Specialized Army Laboratories 7, 378
NOBLE, K. L. Adequacy of College Mathematics 2, 121
NUNAN, E. J. Role of Professional Licenses 10, 575

PIPER, H. D. English and History for the Engineer 8, 460
PLANK, W. B. 5-Year Mineral Engineering Programs 2, 103
PLATT, W. Can Curricula in Industrial Engineering Be Unified? 2, 115
POTTER, J. H. Developing a Combustion Laboratory 2, 107

RATHE, A. W. Communications—Responsibility of Management 9, 524
ROGERS, W. W. Isn't This the Crying Need? 7, 387
ROSS, F. W. A Procedure for Teaching Fundamentals 2, 79
ROWE, R. S. Purpose of a College Education 8, 483
RUBEY, H. Engineer Becomes a Professional Manager 5, 338

SAVILLE, T. Achievements in Engineering Education 4, 222
SAYLOR, R. B., ERNST, G., TEARE, B. R., AND COLLIER, P. D. Minimum Mathematical Requirements 3, 136
SCHATZ, E. R. The Electrical Engineering Curriculum—Professional Education in 4 Years 7, 423
SHELLEY, H. P., CALVERT, J. F., AND HARTENBERG, R. S. Bases of Engineering Problem-Solving Skills ..9, 509
SHERWOOD, T. K. Should Engineering Schools Teach Engineering? 7, 383
SMITH, J. M. Integration of Chemical Engineering Fundamentals 9, 537
SNELL, J. R. Let's Clean House 9, 49
SONNENSCHEIN, C. L. Engineering History—A Pedagogist's Problem ..9, 504
SPRAGUE, R. C. Training Engineers for Industry 8, 451
SWALM, R. O. Simplified Technique for Item Analysis 7, 394
SWANN, W. F. G. The Engineer and the Scientist 4, 241

TEARE, B. R., ERNST, G., SAYLOR, R. B., AND COLLIER, P. D. Minimum Mathematical Requirements 3, 136

UPSON, R. H. Open-Book Examinations 7, 420

VIERTEL, W. K. The Optional Problem 10, 581
VOIGT, M. J. Use of Printed Materials in Engineering and Science 9, 519

WATERMAN, A. T. Government-Supported Research 3, 153
WESSMAN, H. E. What Are Contemporary Demands on Engineering Curricula?—Civil Engineering 5, 298
WHITE, M. M. Distinguished Professor at the University of Kentucky ..10, 573
WILKE, H. Use of Films as "Outside Assignments" 3, 171
WILSON, C. L. What Are Contemporary Demands on Engineering Curricula?—Mining and Metallurgical Engineering 5, 312
WLADAVER, I. Reliability vs. Validity .9, 540
WOOD, K. D. Aeronautical Engineers, '52 Supply and Demand 2, 90
WOOLRICH, W. R. In Recognition and a Forward Look 1, 1
WOOLRICH, W. R. The Professional Engineer—Ascending to New Heights or Leveling Off to Mediocrity? ..8, 433

Reserve this date . . . .

June 14-18, 1954

ANNUAL MEETING

UNIVERSITY OF ILLINOIS
URBANA, ILLINOIS

"Outside
.....3, 171
emporary
Curricula?
cal Engi-
.....5, 312
lidity .9, 540
Engineers,
.....2, 99
ion and a
.....1, 3
ional En-
v Heights
rity? ..8, 439